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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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08/27/2001

Won-Keun Kong

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08/22/2005

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EXAMINER

HEINRICHS, CHRISTOPHER P

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/938,507

Applicant(s)

KONG, WON-KEUN

Examiner

Christopher P. Heinrichs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to the amendment of 6/20/05. All changes made to the Drawings and Claims have been entered. Accordingly, Claims 1-9 are currently pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 5, 7, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent #6,829,239 to Bhatia et al.

4. With regard to claim 1, Bhatia discloses a network address conversion system (LAN modem, fig 3 item 300) comprising a reservation unit (fig 3, item 330, refer to fig 5, item 520 and brief description of fig 5) which receives an access reservation demand (return packet of a new session, col 17 line 59) from an external node (fig 5, item 510) to access a specific node (fig 5 item 504a) of a private network (fig 5 item 502), an external port allocation unit (CPU, fig 3 item 330, refer to fig 7 and brief description of fig

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7) which allocates a first external port value (col 23 lines 3-5) to the specific node in response to the access reservation demand which is received from the external node (col 18 lines 54-58, and fig 8 item 828) and transmitting the first external port value to the external node (col 16 lines 45-47, refer to fig 7 where specific node is workstation 121.164.1.2 of Table 1 and fig. 5), a mapping table which stores the first external port value (fig 9 and fig 5 item 435), and an address conversion unit (CPU, fig 3 item 330, refer to fig 5 and col 17, lines 20-26 and Table 1, Case III and Case IV).

5. With regard to claim 3, Bhatia discloses the system of claim 1 and further teaches the specific node of the private network includes the private IP address (fig 5, item 504a, address is 121.164.1.2) and an internal port value (refer to Table 1, column heading "Source Port No. 608"), first item atop column).

6. Claims 5 and 7 consist of method steps performed by the system of claims 1 and 3, respectively. They are therefore rejected on the same grounds.

7. With regard to claim 9, Bhatia discloses in col 7 lines 40-46 that the process and modules (method) of his invention are stored in non-volatile memory for execution by a CPU to carry out the method of claim 9 which has been rejected as set forth above.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 2, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,829,239 to Bhatia et al. in view of U.S Patent #6,128,298 to Wootton et al.

11. With regard to claim 2, Bhatia discloses all aspects of the claimed invention as set forth in the rejection of claim 1. The system as described above includes a reservation unit and a mapping table but fails to explicitly teach functionality to delete the first external port value from the mapping table in response to the cancel demand. However, Wootton discloses a mapping table (lookup table, col 3 lines 10-15) and the functionality of deleting, when receiving an access reservation cancel demand (zeroing

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upon detection of an end of transmission code in the packet, col. 3, lines 20-22) the first external port value (lookup table entry, col. 3, line 21, and private network's port number, col. 3, lines 14-15) allocated to the specific node. Therefore, it would have been obvious to one ordinarily skilled in the art at the time of the invention to use the deletion functionality disclosed by Wootton in conjunction with the mapping table of the system disclosed by Bhatia to effect efficient use of a network address conversion system's resources. The motivation for doing so would have been when the external node indicates that it no longer desires the connection to the internal node, and the stored information is no longer necessary or relevant, the implementation of the deletion functionality would remove the stored information to allow room in the table for other information.

12. Claims 6 consists of a method for which all constituent steps are performed by the system disclosed by Bhatia in view of Wootton in claims 2, and is therefore rejected on the same grounds.

13. Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent #6,829,239 to Bhatia et al. in view of U.S. Patent #6,760,780 to Chitturi. Bhatia discloses the network address conversion system of claim 1 and the public IP address of the external node (fig 5 item 510) but does not disclose allocation of a second (or more) port for use by the external node. Chitturi, however, discloses a node on a private network with a private IP address (fig. 2, item 104) and communication

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between the public node and the private node through a proxy. The communication, which is illustrated by fig. 12 and col. 13, lines 8-12, shows the external node using 2 ports, an audio port 1400 and a video port 1500 which, in this case, is the second port the external network node includes. It would have been obvious to one ordinarily skilled in the art at the time of the invention to include in the functionality of the network address conversion system taught by Bhatia the external network node having a public IP address (as the external network node of Molitor resides in an address realm outside of the address realm of the internal node (Molitor, col. 11 lines 35-36)). The motivation for doing so would have been to allow the external network node to use two or more ports for communicating with an internal node, as is typically done in modern multimedia communication.

14. Claim 8 claims a method for which all constituent steps are performed by the system disclosed by Bhatia in view of Chitturi in claim 4, and is therefore rejected on the same grounds.

Response to Arguments

15. Applicant's arguments filed 6/20/2005 have been fully considered but they are not persuasive.

16. The applicant argues that the cited reference from the first office action does not provide any teaching or suggestion of allocating external port values in response to an access reservation demand which is received from an external node. However, given

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the citations set forth in the rejection of claim 1, in conjunction with col 18 lines 20-24, the examiner interprets the return packet, since it is the *first* packet of a *new session*, to be a demand to reserve access to the internal node. Accordingly, as set forth in the rejection of claim 1, the network address conversion system allocates as a new entry in the table cited in the rejection of claim 1 the new external port value.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Heinrichs whose telephone number is 571-272-8397. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Heinrichs
AU 2663


RICKY NGO
PRIMARY EXAMINER

8/18/05